<u>REMARKS</u>

This Amendment is submitted in response to the Office Action dated March 14, 2008.

Claims 1 through 19 remain pending in the application.

The Examiner objects to the Specification for failing to be written in a full, clear, and concise manner. The specification has been revised substantially to more clearly state the invention and to comply with the requirements of 35 U.S.C. § 112.

Claim 1 was rejected under 35 U.S.C. § 112 as contradictory to the disclosure of FIG. 3. Claim 1 has been amended to correct this deficiency. Claim 1 was further rejected under §112 as failing to provide a proper antecedent basis for the limitation "the calculated delay time" in line 7 of the claim. It is observed that the limitation is introduced utilizing the indefinite article "a" immediately prior to and on the same line as the limitation. The claim has been amended and it is believed the basis for this rejection has been cured.

Claim 17 was also rejected under 35 U.S.C. § 112 as failing to provide a proper antecedent basis for the limitation "the number of the parked slave" and "the number of packet" in line 5 of the claim. The claim has been amended including utilization of the indefinite article and it is believed the basis for this rejection has been cured.

Claim 1 through 3 are rejected as obvious under 35 U.S.C. §103(a) and therefore unpatentable over Fujioka (US2002/0193073) in view of Hayashi et al. (US2003/0021288). According to the Examiner, the steps of determining if an active member address remains available in response to a slave's communication request and allocating an available active member address if one is available is inherent in the Bluetooth protocol. Further, according to the Examiner, the steps of determining a service sequence for the slaves when more than seven slaves request active member addresses (such that an insufficient number of addresses are

available) and allocating a sniff interval time and an active member address to each of the slaves

before converting the slave to sniff mode are disclosed by Fujioka. The applicant disagrees.

Fujioka utilizes the Bluetooth park mode in its conventional form (if for an unintended

use) in order for a master to communicate with more than seven slaves in a piconet. Although

park mode is intended for power saving by inactive slaves, Fujioka's master uses it to force

slaves to release active member addresses in order to make those addresses available for other

devices. Fujioka's master then continues to force slaves in and out of park mode in a round robin

fashion. Avoiding this slow release and re-acquire process of moving slaves into and out of park

mode is precisely one of the objects of the present invention.

As described in the Specification, Bluetooth networks are limited to seven slaves in

active mode due to the fact that only 7 active mode addresses exist under the 3 bit addressing

scheme (an eighth address must be used by the master). Slaves in sniff mode retain their active

member address and remain synchronized with the master time clock while entering a low power

consumption mode. Parked slaves do not retain an active member address and enter an even

lower power consumption mode, only periodically monitoring network activity to stay

synchronized with the master clock. Staying synchronized permits them to use the 8-bit Parked

Member Address (PM_ADDR) and Access Request Address (AR_ADDR) to request return to

active status at an appropriate time or to respond to such a request from the master.

In contrast, the present application uses the Sniff mode to accomplish communications

with more than seven slaves, and the need to continuously assign and revoke Active Member

Addresses is avoided by allowing more than one slave to utilize the same active member address.

However, because multiple slaves can transmit using the same active member address, a way of

determining which slave is the source of the transmission is needed. This is accomplished by the

sniff interval time (SIT) table which correlates transmission at a specific time interval by a particular active member with a specific slave. Sniff interval times at which to transmit and an active member number to utilize at that time (See table 2) are transmitted to the slave by the master before the slave enters sniff mode. A master table for all slaves is maintained by the master (see table 1). Controls on the slave device wake the device at the appropriate time to transmit in response to the polling cue by the master. No address need be acquired or assigned at that time slowing communications.

Under Fujioka, no SIT time is transmitted to the Slave and all timing controls are done by the master, slowing the process. When the master determines that it is a particular slave's turn to communicate, it issues a Parked Member Address (PM_ADDR) and Access Request Address (AR_ADDR) to a currently active slave and then issues a LMP_unpark_PM_ADDR request signal to the next slave whose turn it is. (See Fujioka ¶76-77.) This request signal includes the Active mode address the new slave is to use and the repeated performance of the process slows communications considerably. Thus, the parked slave of Fujioka does nothing but wait for commands from the master to transmit or receive and is not an active participant of the communication scheme.

Fujioka fails to disclose allocating or transmitting a SIT to the slave or transmitting of an active member address according to the service sequence to the slave. Fujioka further fails to disclose the self waking up of the slave at the SIT indicated by the transmitted SIT table.

Likewise, Hayashi et al. fails to teach the foregoing limitations. The Examiner credits Hayashi et al. with teaching a dynamic call connection scheme where an average delay time (obviously calculated) is compared with a predetermined threshold when a new call request is received, wherein the call is rejected if delay time is longer than the predetermined threshold

(Fig. 8, paragraph 0097). However, this description is tailored to a mobile packet communications method in a W-CDMA system, and merely pre-measures the amount of data transferred onto a packet call per unit time so that an arbiter can decide whether or not to admit the packet call depending on the measured amount of data. This only marginally relates to calculating if a "service delay time is larger than the predetermined reference value, [and if so] refusing a call acceptance. However, it moves no closer toward disclosing the balance of claim 1, namely, allocating or transmitting a SIT to the slave or transmitting of an active member address according to the service sequence to the slave, and further fails to disclose the self waking up of the slave at the SIT indicated by the transmitted SIT table. Claim 1 as amended requires *"in case the service delay time is smaller than the predetermined reference value, converting a slave that has requested the call to sniff mode and determining a service sequence with respect to a predetermined reference according to the number of the slave calculated at a pre-scheduling duration; and allocating and transmitting a sniff interval time and an active member address to each of the slaves according to the service sequence, and converting the slave allocated and given the sniff interval time and the active member address to be in a sniff mode; and self waking-up of a slave from sniff mode at the sniff interval time and using the active member address to complete the communication with the active master and to return a use right of the active member address.* Neither Hayashi et al. nor Fujioka teach or suggest the foregoing limitations. Therefore, employing the Hayashi et al. scheme in a Bluetooth connection as in Fujioka still fails to teach or suggest all of the elements of the present invention and claims 1-3 are patentably distinguished.

Claim 6 is also rejected as obvious under 35 U.S.C. §103(a) and therefore unpatentable over Fujioka (US2002/0193073). Claim 6 is similar to claim 1 with the additional steps of

receiving a request to communicate from one or more slaves in park mode. The master counts

the number of slaves making such a request during the beacon window and includes those slaves

in its creation and transmission of the SIT table as under claim 1. In this way slaves can still

utilize the increased power savings of true park mode and be acknowledged and cued in sniff

mode (according to claim 1) when transmission is needed. Fujioka fails, as previously described,

alone or in combination, to disclose all of the elements of claim 1 and thus likewise fails to

disclose the elements of this claim as well.

Claim 17 is rejected as anticipated under 35 U.S.C. §102 and therefore unpatentable over

Fujioka (US2002/0193073). Claim 17 is an apparatus claim that includes a pre-scheduling unit

that determine, among other things, the appropriate sniff interval time. As described above,

Fujioka does not utilize sniff mode nor disclose or have any need to disclose a sniff interval as all

communication timing is controlled by the master. Further, the apparatus of claim 17 further

discloses a controller for controlling the park mode controller, pre-scheduling unit and the

transceiver. The Examiner asserts that paragraph 73 of Fujioka discloses this element. Fujioka, in

paragraph 73 or elsewhere discloses only a memory unit 80 and not a controller. Presuming a

logic circuit in Fujioka, the memory unit only remembers the order in which the slaves are

parked in order that they be un-parked a communicated with in sequence. Nothing suggests of

teaches a controller controlling the transceiver for transmitting the sequence to the slaves prior

to entering sniff mode, to say nothing of transmitting the Active Member Address and Sniff

Interval, as in the present invention. For these reasons and the differences pointed out above,

Fujioka fails to anticipate all elements of claim 17.

Claims 1, 6 and 17 have been amended to address the concerns of the Examiner, for

clarity and to highlight the differences between the present invention and the prior art. Claims 2-
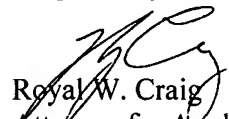
5, 7-16 and 18-19 are but are but additional recitations and are therefore patentably distinct as are

the claims from which they depend.

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In view of the above amendments and remarks, it is believed that this application is now

in the proper condition, and a Notice of Allowance is respectfully requested.

Respectfully submitted,

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